

Washoe County Regional Medical Examiner's Office

2016 Data on Suicides in Northern Nevada



**REGIONAL MEDICAL
EXAMINER'S OFFICE**



**Nevada Department of
Health and Human Services**
**Office of
Suicide Prevention**

Table of Contents

Letter from the Chief Medical Examiner	1
Letter from the Office of Suicide Prevention	3
Introduction to the Data	4
I. Demographics	5
II. Youth and Adolescents.....	9
III. Geography	10
IV. Timing	11
V. Intent and Rationale	12
VI. Methodology	14
VII. Toxicology and Addiction	18
VIII. Mental Health and Past Suicidal Ideation.....	21
IX. Healthcare and Chronic Illness	24
Conclusion	28

Letter from the Chief Medical Examiner

Suicide is a significant public health threat in Nevada, with our state's 2016 ranking at 5th in the nation for suicides.^{1, 2} There has been a steady rise in teen suicides in Nevada.^{1, 2} Our seniors 65 and over have the highest suicide rate in the nation and Nevada has been the highest in the nation except for 2 years, 2013 and 2015.^{1, 2} Nevadans are concerned: what is driving many of our fellow citizens to choose ending their lives? Efforts aimed at suicide awareness, alertness, intervention, and postvention are a critical priority for our nation and our state.

Medical Examiners and Coroners (ME/C) are a potential resource for extensive data regarding suicides, which fall under ME/C jurisdiction. In addition to Washoe County, the Washoe County Regional Medical Examiner's Office (WCRMEO) provides Medical Examiner services including autopsies to 13 additional Nevada coroner counties and 5 California counties. The WCRMEO is actively engaged with data collection efforts at the local/state and national levels, and is the first ME/C office in the state to partner with the CDC in the National Violent Death Registry System (NVDRS). We recently added a grant-funded data specialist dedicated to this project. Additionally, WCRMEO works closely with the state Office of Suicide Prevention, providing investigative reports and other requested materials, as well as subject matter experts' input when requested, to the Committee to Review Suicide Fatalities. This close collaboration sparked the idea for the enclosed report, which is representative of the WCRMEO's commitment to supporting statewide suicide reduction efforts.

The current report is the product of collaboration among the Office of Suicide Prevention, Committee to Review Suicide Fatalities, the University of Nevada Reno (UNR), and the WCRMEO. UNR graduate student Cordelia Alexander-Leeder extracted data from all suicide cases investigated in 2016 by the WCRMEO. She further analyzed the data to provide graphical representations, and recommendations based on conclusions from the data analysis. Chief Medical Examiner Dr. Laura Knight, and Suicide Prevention Coordinator Misty Vaughan Allen, MA with the Office of Suicide Prevention (Nevada Department of Health and Human Services, Division of Public and Behavioral Health), served as advisors in the design of the research project and formulation of this report.

This data is currently being used extensively by the Office of Suicide Prevention's Committee to Review Suicide Fatalities. It is our sincere hope others may find the data of use in formulating prevention modalities which will have a positive impact in reducing Nevada's suicides.



Laura D. Knight, MD
Chief Medical Examiner & Coroner
Washoe County Regional Medical Examiner's Office, Reno, NV
July 2018

1. CDC Web-Based Injury Statistics and Reporting System (crude rates),
<https://www.cdc.gov/injury/wisqars/fatal.html>
2. American Association of Suicidology, Facts and Statistics (crude rates),
<https://www.cdc.gov/injury/wisqars/fatal.html>

Letter from the Office of Suicide Prevention

The Nevada Office of Suicide Prevention (OSP) was created in December 2005 in response to high suicide rates in the state. Since then, OSP staff have implemented state and national strategies to prevent suicide in Nevada. The OSP provides outreach and prevention training to people at risk for suicide, those who have been impacted by another person's suicide and the numerous Nevadans working to prevent suicide. The current state plan incorporates guidelines provided in the National Strategy for Suicide Prevention (2012), including "a better understanding of how suicide is related to mental illness, substance abuse, trauma, violence, and other related issues; new information on groups which may be at an increased risk for suicidal behaviors; increased knowledge of the types of interventions that may be most effective for suicide prevention; and increased recognition of the importance of implementing suicide prevention efforts in a comprehensive and coordinated way."

To further investigate and discover missed opportunities for prevention, the Committee to Review Suicide Fatalities was created to make recommendations for law, policy, practice changes, staff training and public education. The committee gathers data through in-depth reviews of individual deaths to understand and evaluate the death investigations; the causes of deaths; the systems that touched the life of the deceased; the relevant risk and protective factors; and the systems improvements needed to catalyze prevention.

The Office of Suicide Prevention worked with the Washoe County Medical Examiner's Office, the Committee to Review Suicide Fatalities, and the School of Community Health Sciences at the University of Nevada, Reno to place a Master of Public Health intern with the Washoe County Medical Examiner. The intern analyzed data from medical records and interviews with family and loved ones who have lost someone to suicide to determine past suicide attempts, escalation of lethal means, connections to care, and any other pertinent information (domestic violence military/veteran status, sexual orientation, gender identification, etc.) not typically listed on a death certificate. This project has facilitated a better understanding of circumstances prior to death by suicide and helped recognize additional opportunities for prevention. The OSP expects this project and future intern work to expedite the development of data collection tools to help in suicide death investigation, as well best practices for treatment, triage, continuity of care, and enhanced follow-up practices. Together the collaboration will use what is learned to improve systems, bringing hope and recovery to Nevada's communities.



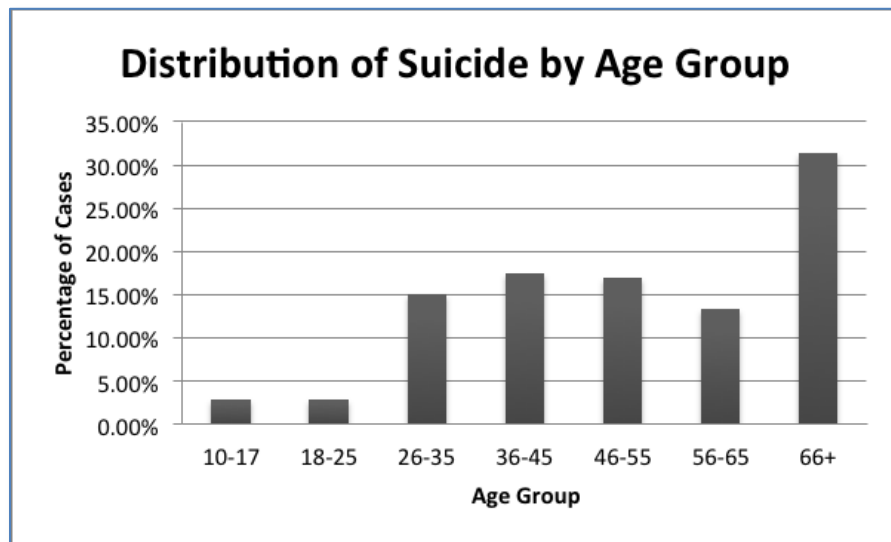
Misty Vaughan Allen, MA
Suicide Prevention Coordinator

Introduction to the Data

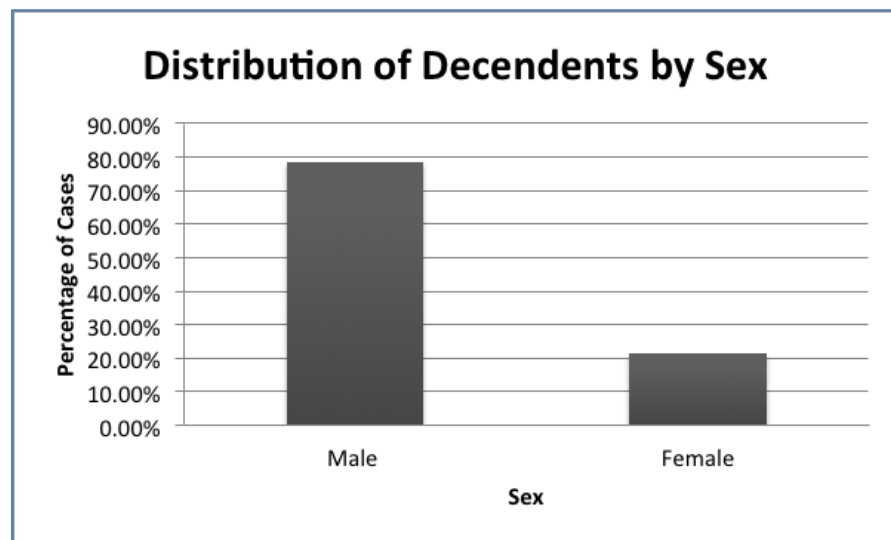
The data analyzed represents calendar year 2016 suicide cases reported to the Washoe County Regional Medical Examiner's Office (WCRMEO). The WCRMEO has jurisdiction for all Washoe County deaths, and also has an extensive referral coverage area providing autopsy services to 18 rural coroner counties. These include 13 Nevada counties (all Nevada counties except Clark, Lincoln and White Pine); and five California counties (Lassen, Alpine, Plumas, Modoc, and Sierra). The research was conducted utilizing VertiQ, an electronic Medical Examiner database, and the paper case files housed at the WCRMEO. The case files contain medical records, the medical examination or autopsy report, and the medicolegal death investigation report. A total of 172 cases were analyzed for descriptive statistics on regional suicide. For the purposes of the data, each death by suicide constituted one "case". Once the data was redacted, cleaned, categorized, and a variable key was created, Excel and SAS (statistical analysis software) were utilized to create graphs and figures. Additionally, through analyzing the cases, some recommendations were identified to improve suicide prevention efforts and future research.

I. Demographics

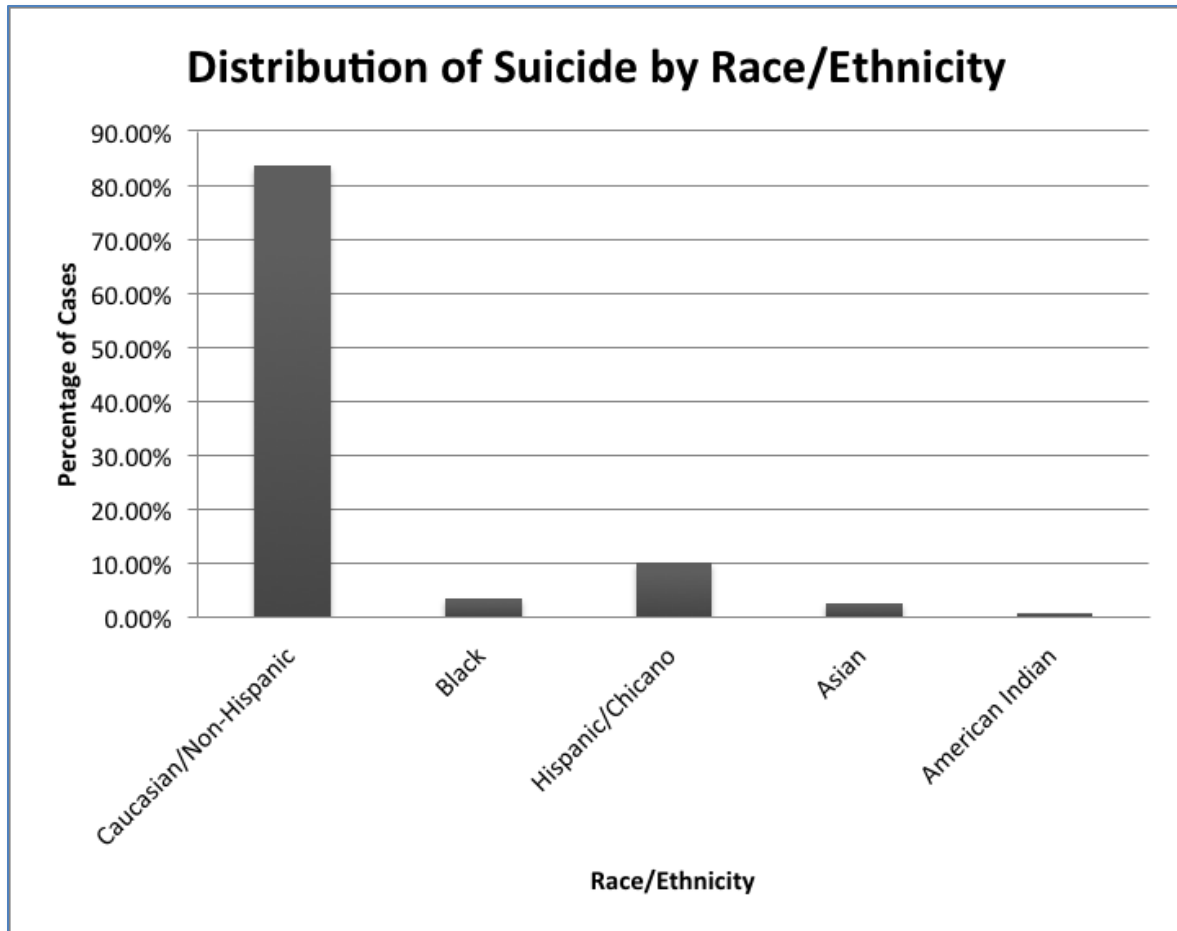
Suicide is more highly concentrated in the older population with 31.40% of regional suicide decedents being 66+.



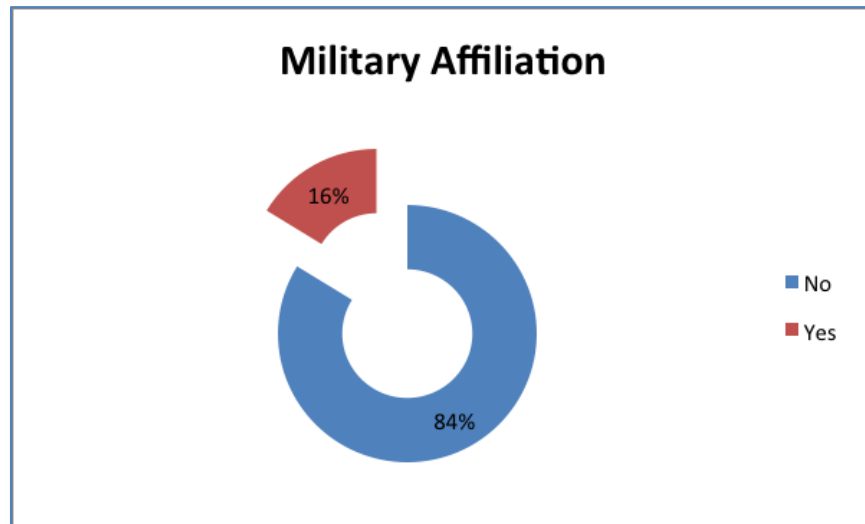
Significantly more decedents are male with 135 male decedents representing 78.49%, and 37 female decedents representing 21.51%.



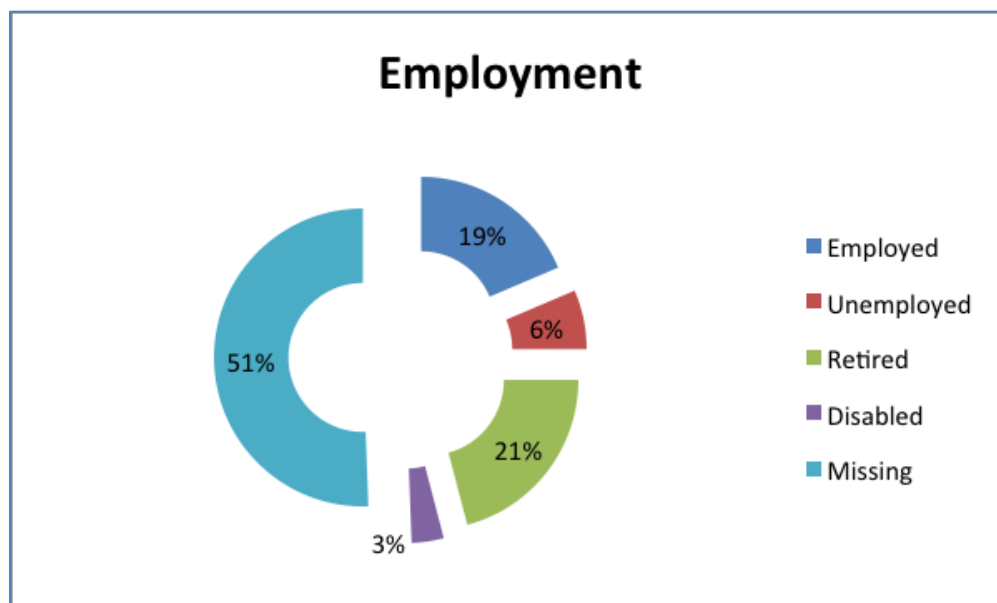
Decedents are predominately Caucasian/non-Hispanic representing 83.72% of cases. Although nationally, it is reported that American Indian and Alaskan Natives have the highest racial disparity of suicide prevalence. The highest volume of suicide cases was noted in February and April 2016



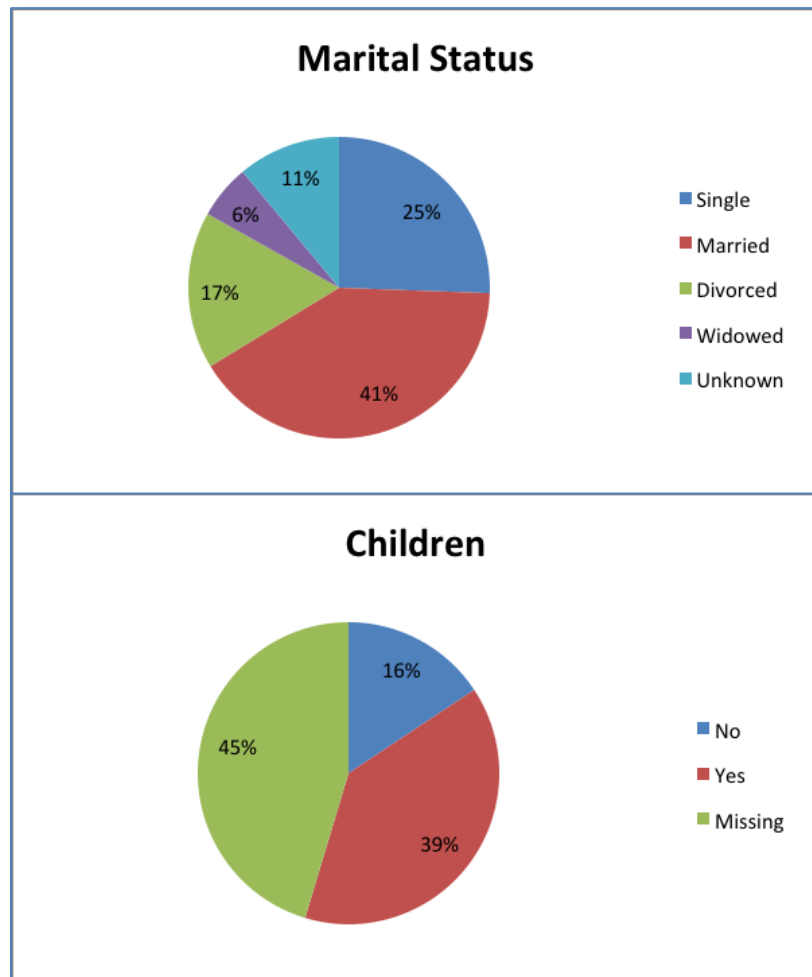
Veterans and active service members are consistently one of the highest suicide risk groups nationwide. Not only because of depression, anxiety, and increased risk of PTSD but also because of the access and training in regards to firearms. Regionally, 16% of suicide decedents had some military affiliation, whether as veterans or active service members. For many decedents in the older demographics, it was difficult to locate a definite veteran status and specifically with which branch they were associated.



There is some research to suggest that employment status, especially recent retirement or termination can be a precipitating event to suicide. Often employment information was missing from suicide case files. Employment status could not be determined for 51% of the decedents, however, employed represented 19%, retired represented 21%, unemployed represented 6% and disabled 3%.



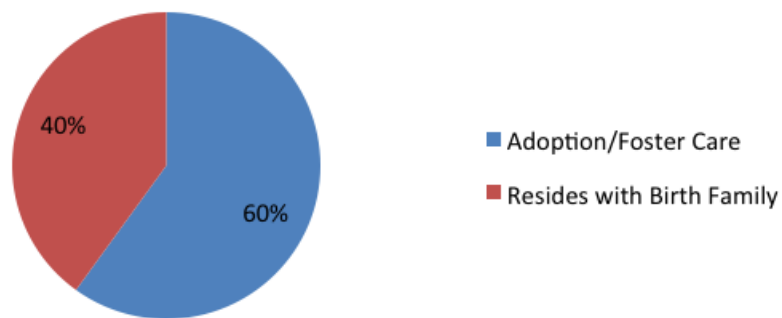
41% of decedents are married or in a serious long term partnership and 39% are noted as having children.



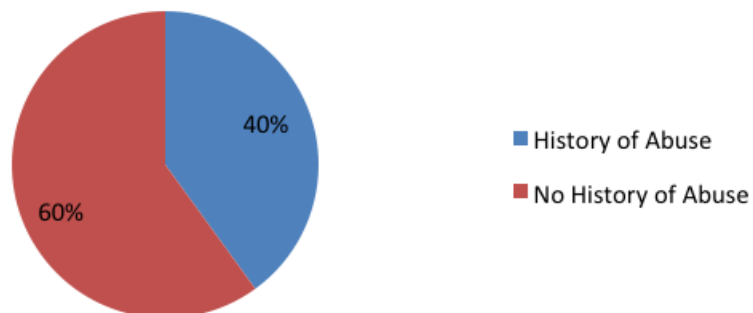
II. Youth and Adolescents

Youth and adolescents are an especially vulnerable population. While there were only 5 decedents within the 10-17 year age group, 60% had a history of adoption or living in foster care and 40% had a noted history of abuse. School counselors, teachers, pediatricians, and anyone who works with children must consider these precipitating factors.

Adoption and Foster Care History in 10-17 Year Old Decedents

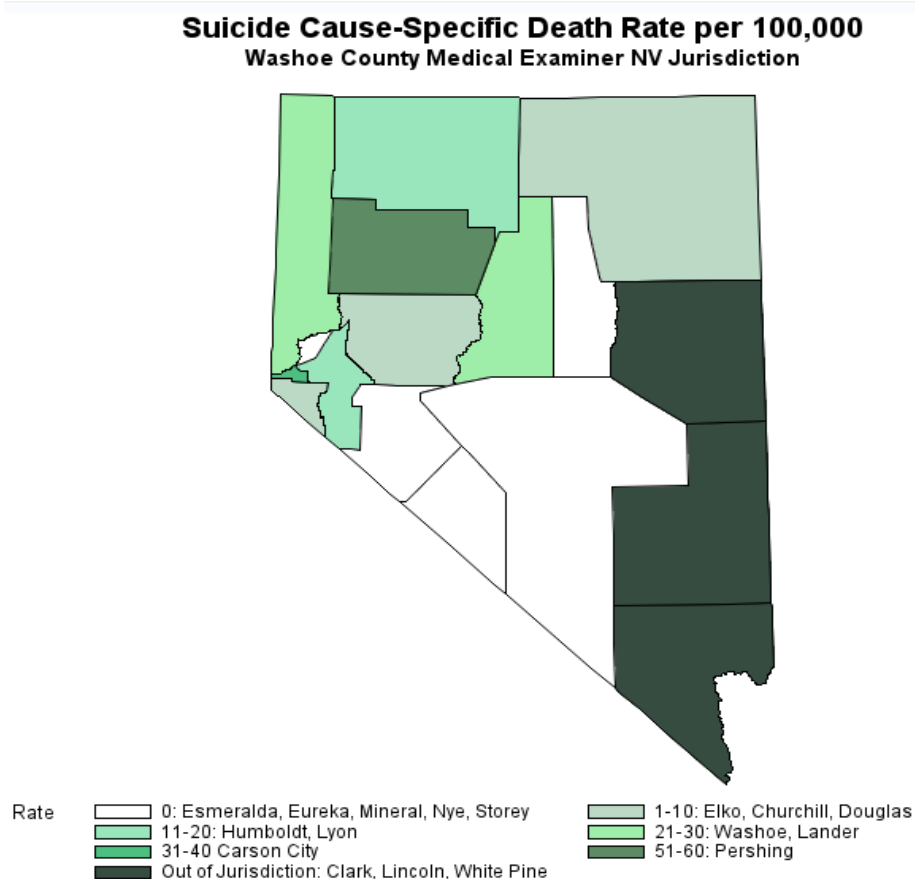


History of Abuse in 10-17 Year Old Decedents

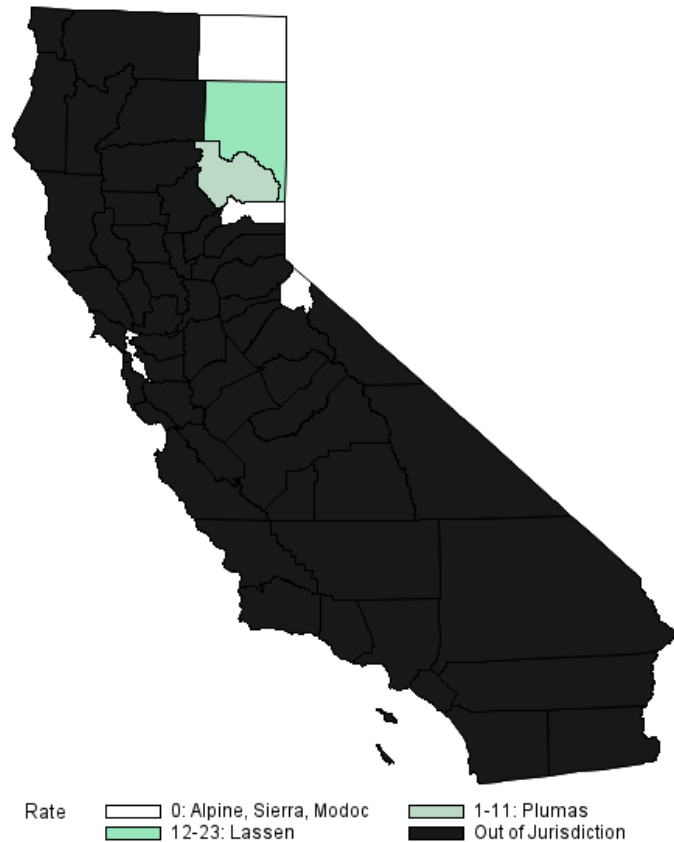


III. Geography

Nationally, suicide rates are higher in more rural areas, as well as Western states. In order to assess the mortality rate, the cause-specific mortality was calculated. The cause-specific mortality rate is the mortality rate from a specified cause for a population. The numerator is the number of deaths attributed to a specific cause and the denominator is the population during the given period. The fraction is usually expressed per 100,000 population. In Nevada, the highest suicide cause-specific death rate was in Pershing County at 59.58 per 100,000. Carson City came in next highest at 35.21 per 100,000. California's Lassen County was the highest at 22.68 per 100,000. For the purposes of these graphs, the location in which the suicide occurred was utilized, as opposed to the location the decedent died. There are many cases where a decedent completes a suicidal act in their home county and is then transferred to a hospital in another county where they subsequently die. For the study purposes, it is more important to observe where the suicide actually took place.

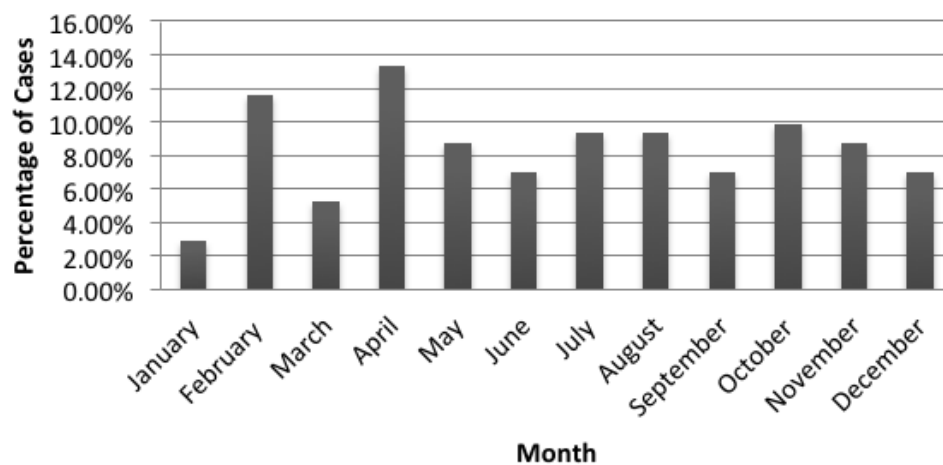


Suicide Cause-Specific Death Rate per 100,000 Washoe County Medical Examiner CA Jurisdiction



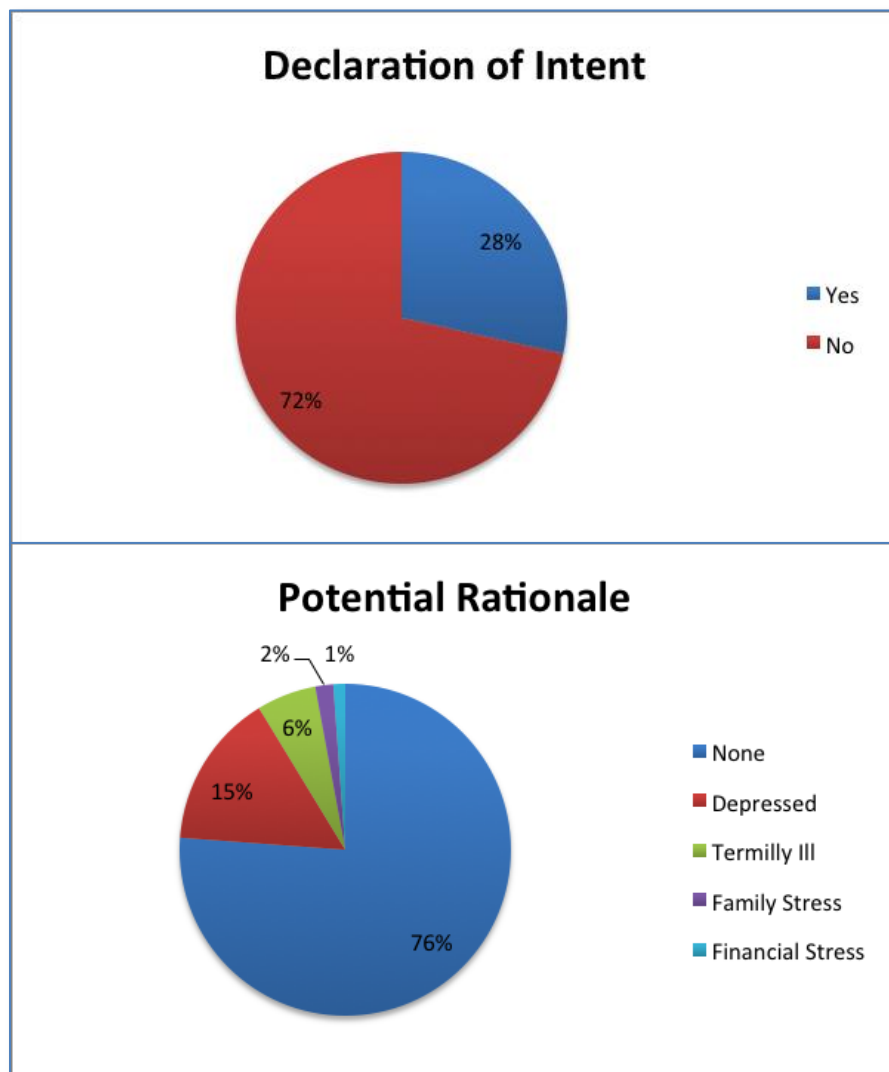
IV. Timing

Distribution of Deaths by Month

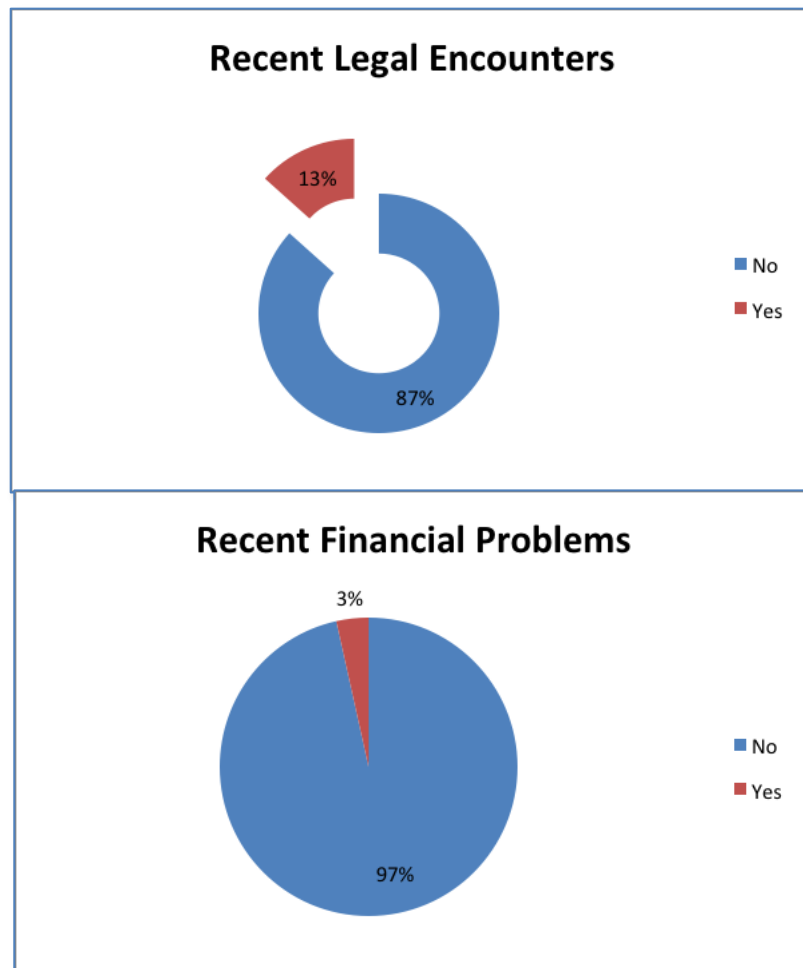


V. Intent and Rationale

28% of decedents left a declaration of intent in some form. Some declarations of intent were written on a Kleenex or a dirty napkin, some were 14 pages long, some were a sentence, some were handwritten and some were typed, many did not contain an explanation and merely just issued apologies and hopes for forgiveness. Within these declarations, and the surrounding circumstances obtained through family and friends, a potential suicide rationale can be ascertained, for 76% there is not an obvious potential rationale, however, depression represents 15% and terminal illness represents 6%.

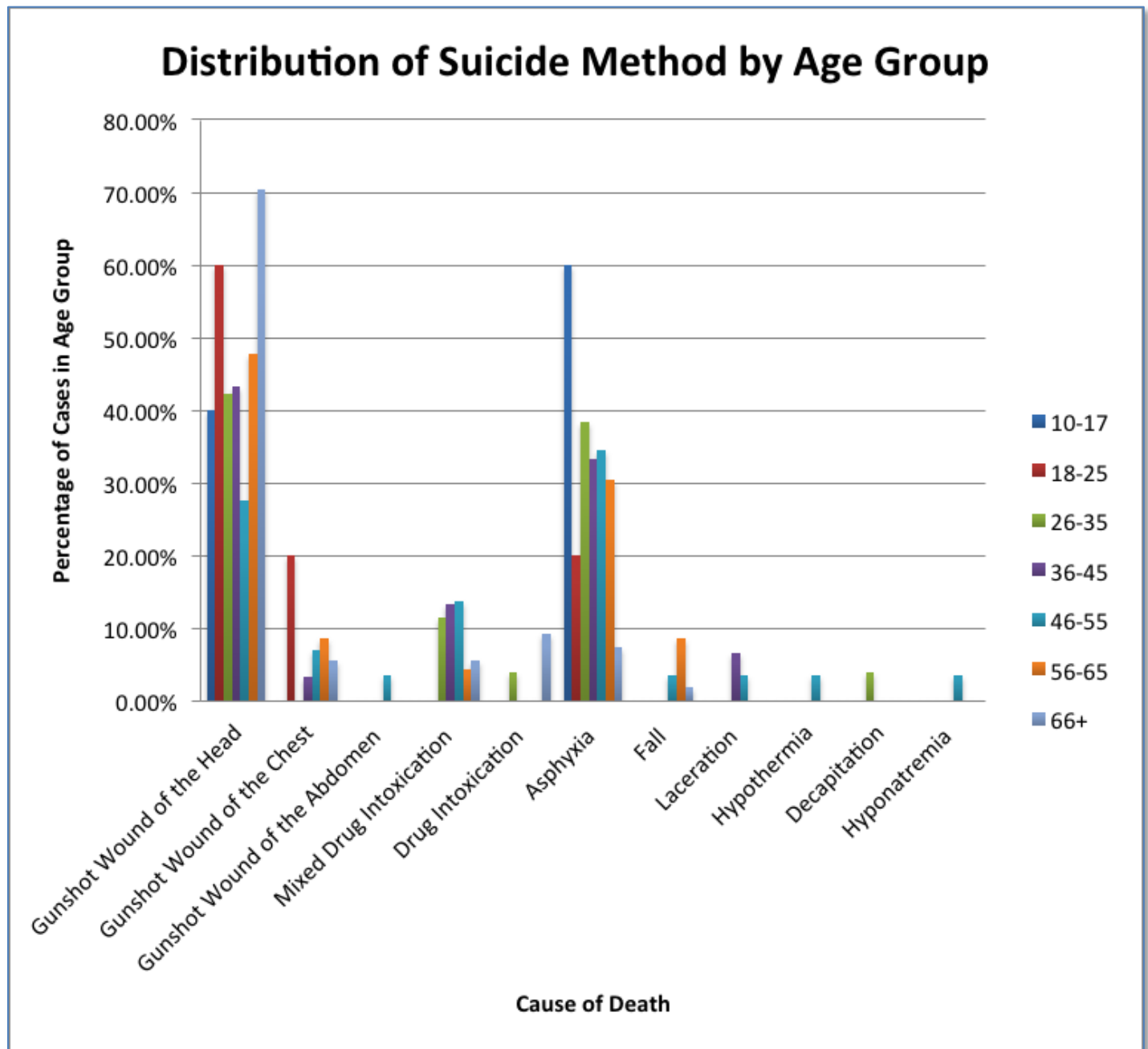


Legal encounters can be an impactful precipitating circumstance, especially in younger decedents. Nationally, a first brush with the law preempts many suicide cases. 13% of suicide decedents regionally had experienced a recent legal encounter. Decedents who were incarcerated at the time of suicide were included within this category as well. 3% of decedents appeared to be experiencing some recent financial problems, such as job loss or increased debt, immediately prior to suicide.

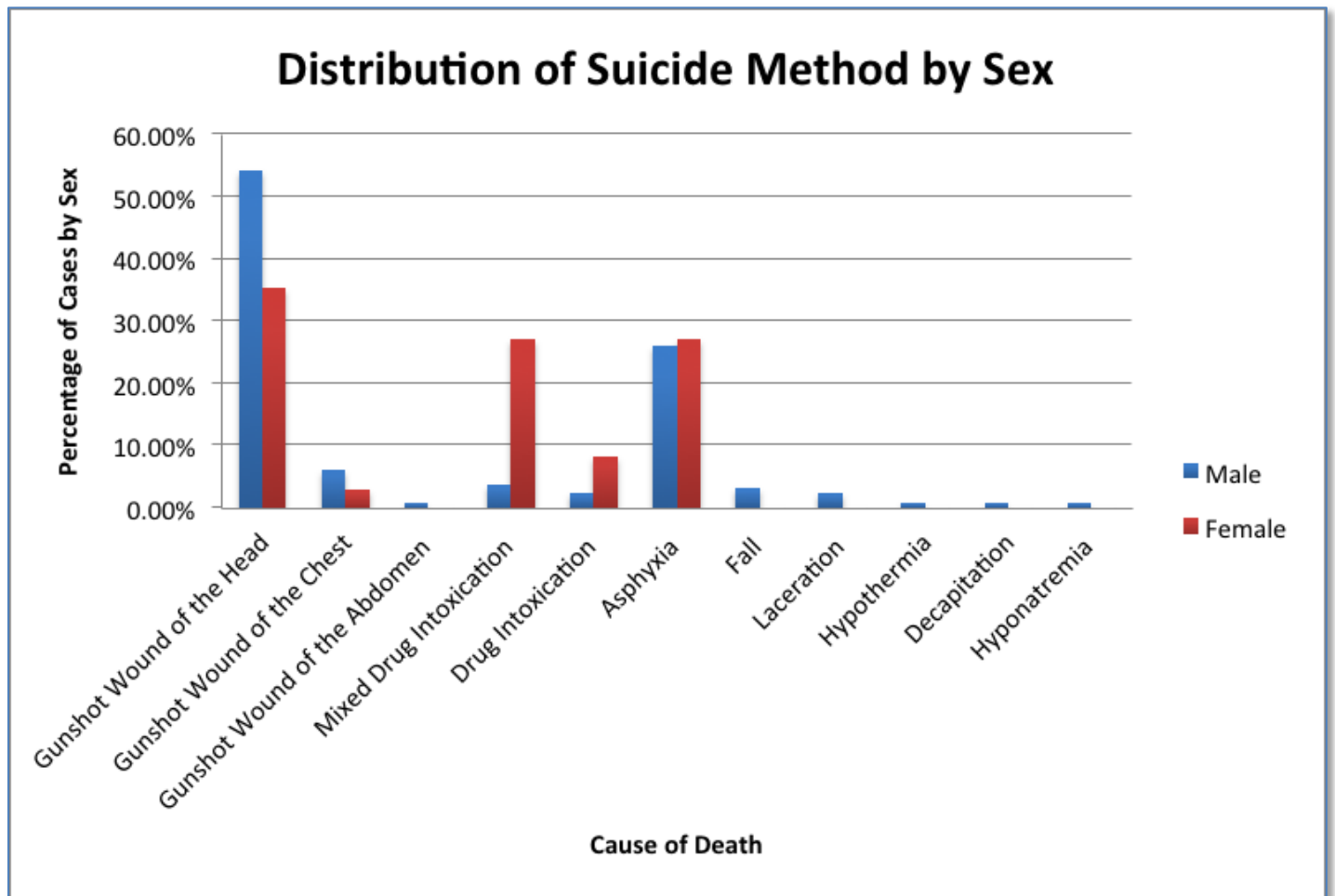


VI. Methodology

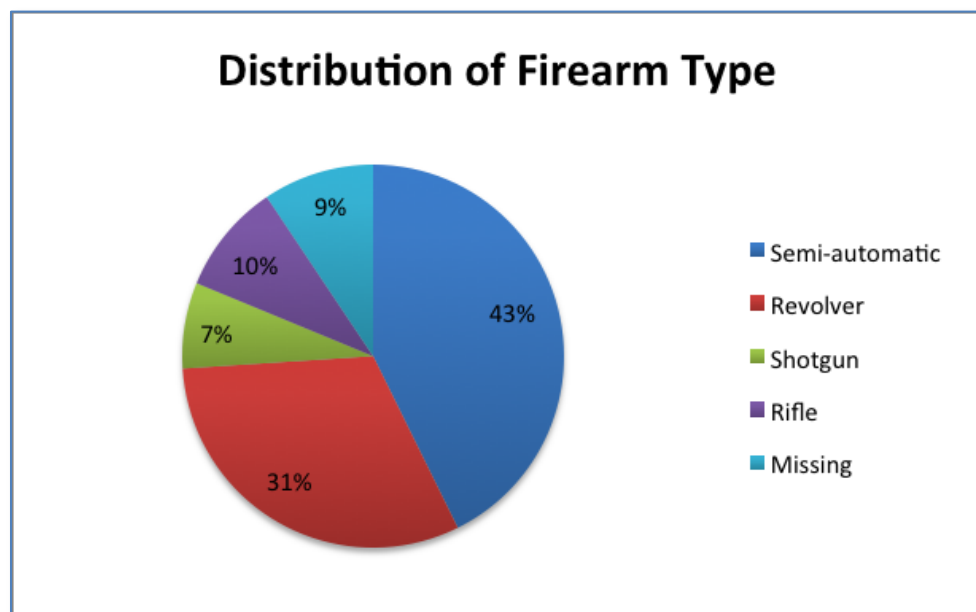
When looking at the Distribution of Suicide Method by Age Group, one can see that gunshot wound to the head is the most prevalently utilized method. 70% of decedents in the 66+ age group had gunshot wound to the head as their cause of death. However, asphyxiation accounts for 60% of the decedents within the 10-17 year old age group. This is similar to national statistics because those under 18 have reduced access to firearms.



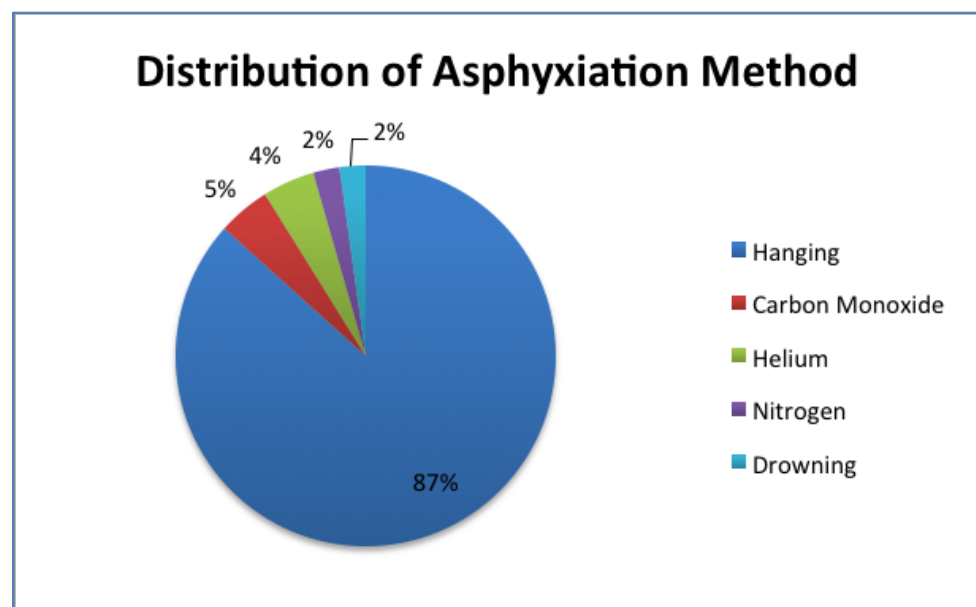
When looking at Distribution of Suicide Method by Sex, one can see that male decedents more frequently experienced gunshot wounds to the head, whereas female decedents utilized mixed drug intoxication as well as asphyxiation. This is also similar to national statistics on suicide method by sex.



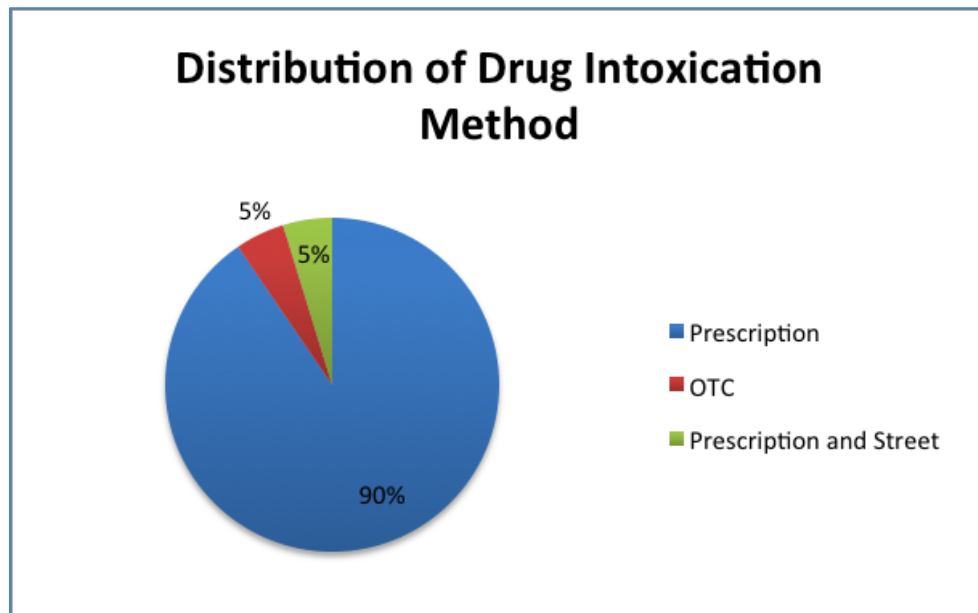
In the 96 gunshot wounds, a semi-automatic handgun was used in 43% of cases, however, a broad range of firearms were used.



In the 45 asphyxiations, hanging was the suicide method used in 87% of cases. Hanging asphyxiation can span and utilize everything from rope and fabric to electrical cord and shoelaces.

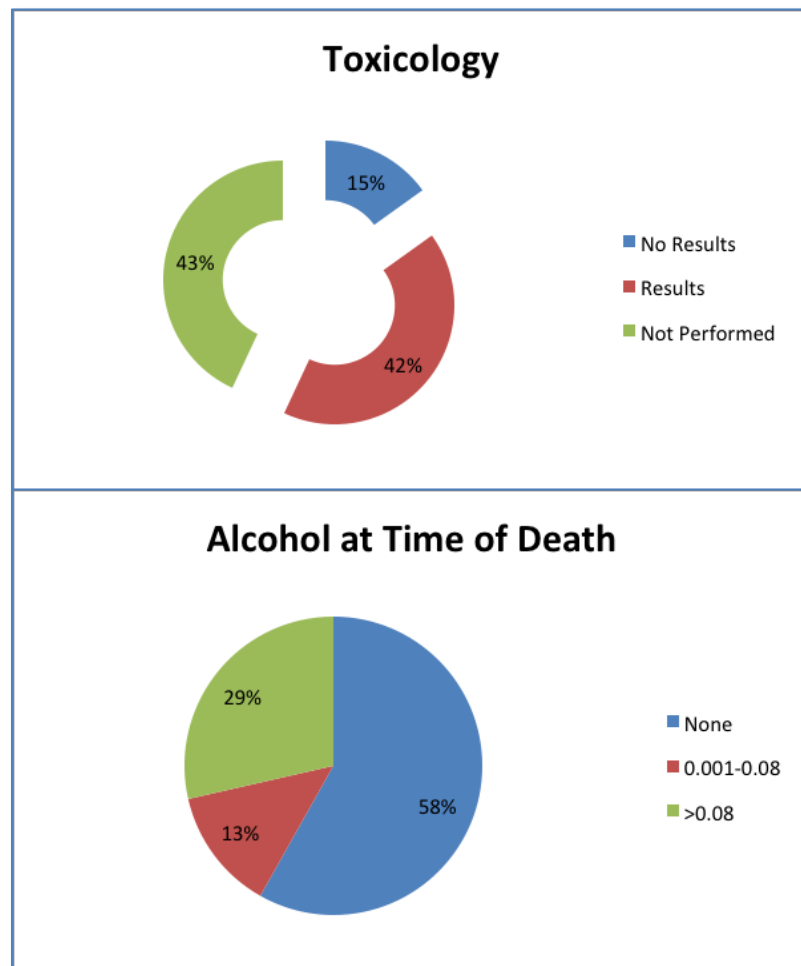


In the 21 drug intoxications, prescription drugs were used in 90% of cases. However, street drugs and over the counter medications were used as well.

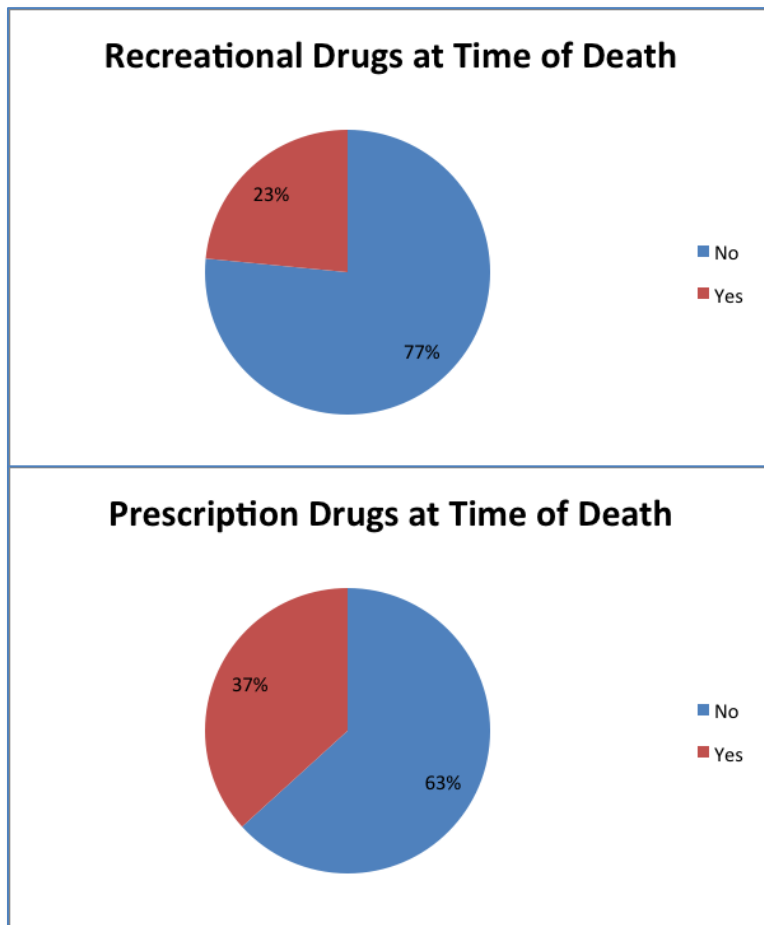


VII. Toxicology and Addiction

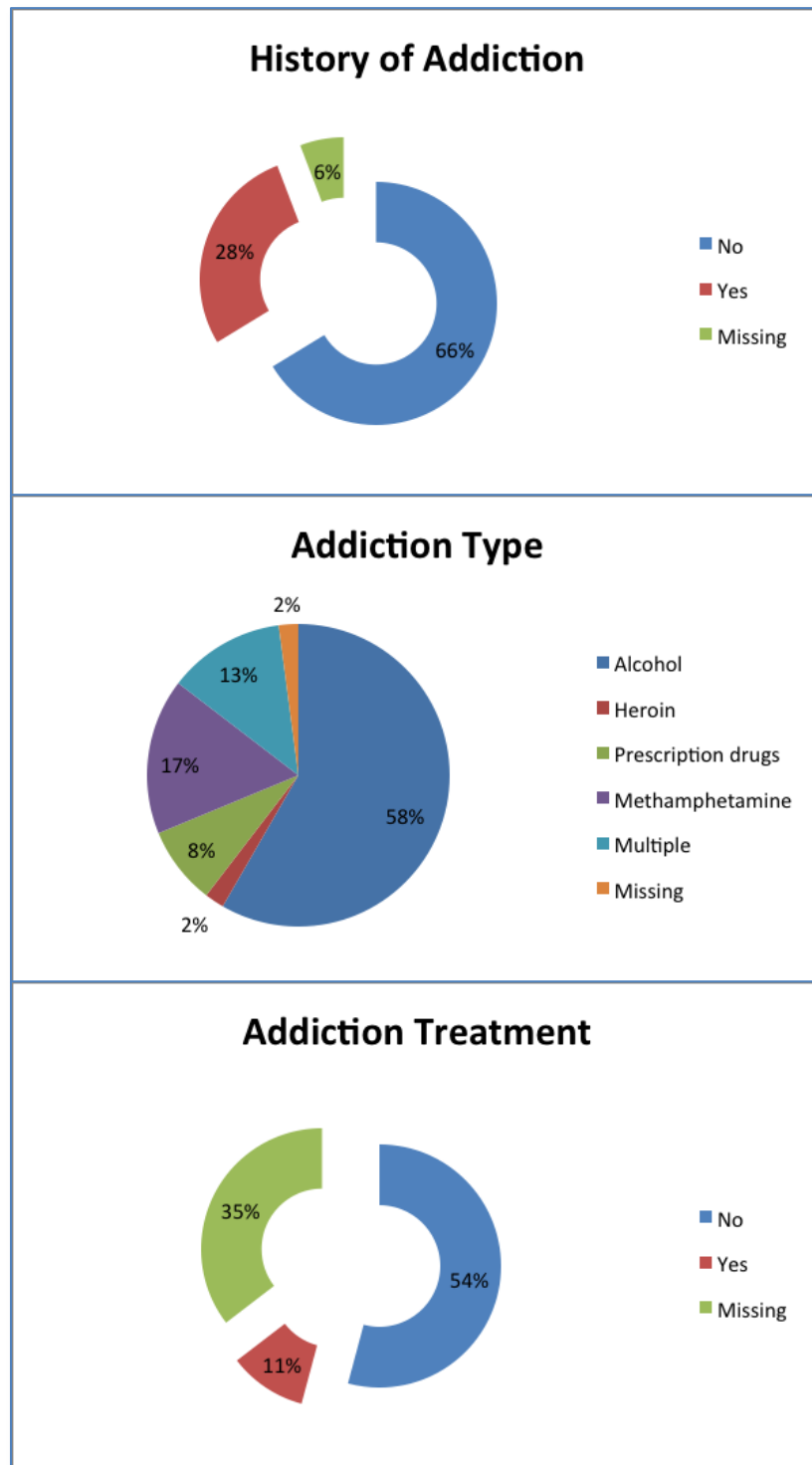
57%, or 98 cases, had toxicology reports performed. Generally toxicology testing is not ordered if the decedent has a very obvious cause of death like a gunshot wound to the head. Of those 98 cases, 42% had a positive blood alcohol level and 29% were over the legal limit of 0.08.



23% tested positive for recreational drugs and 37% tested positive for prescription drugs.

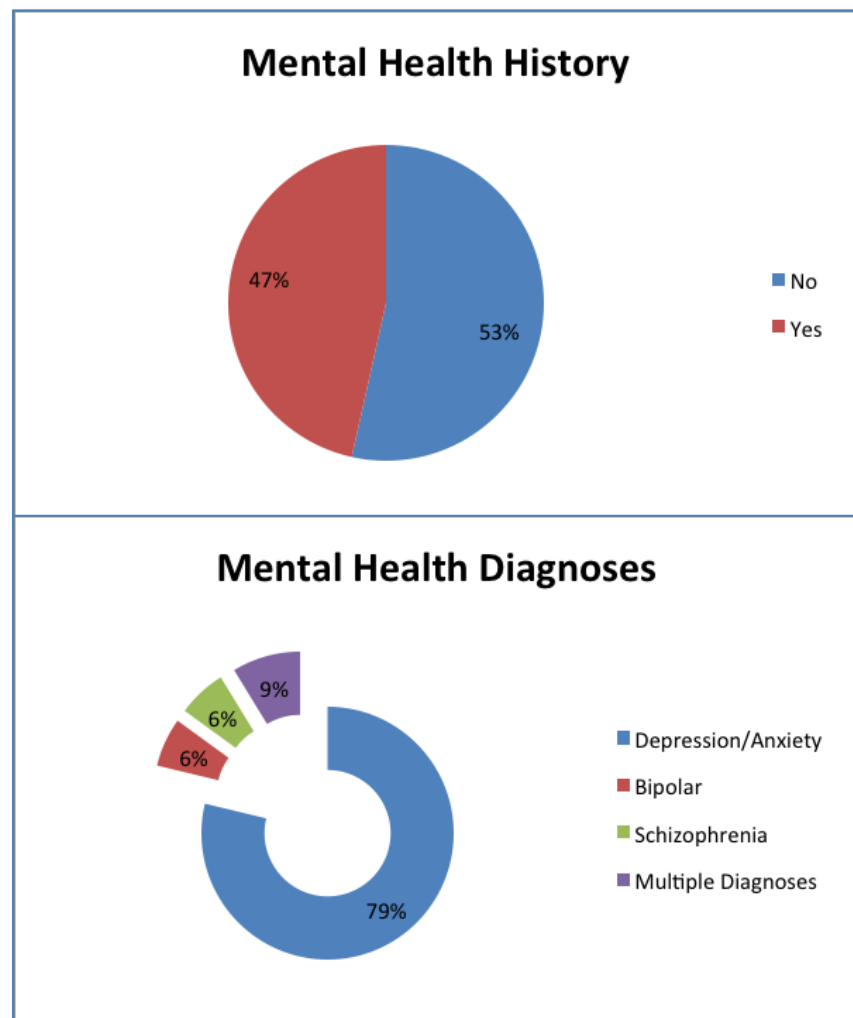


28% of cases had a history of addiction and 58% of those cases noted addiction to alcohol. Only 11% noted receiving addiction treatment of any form.

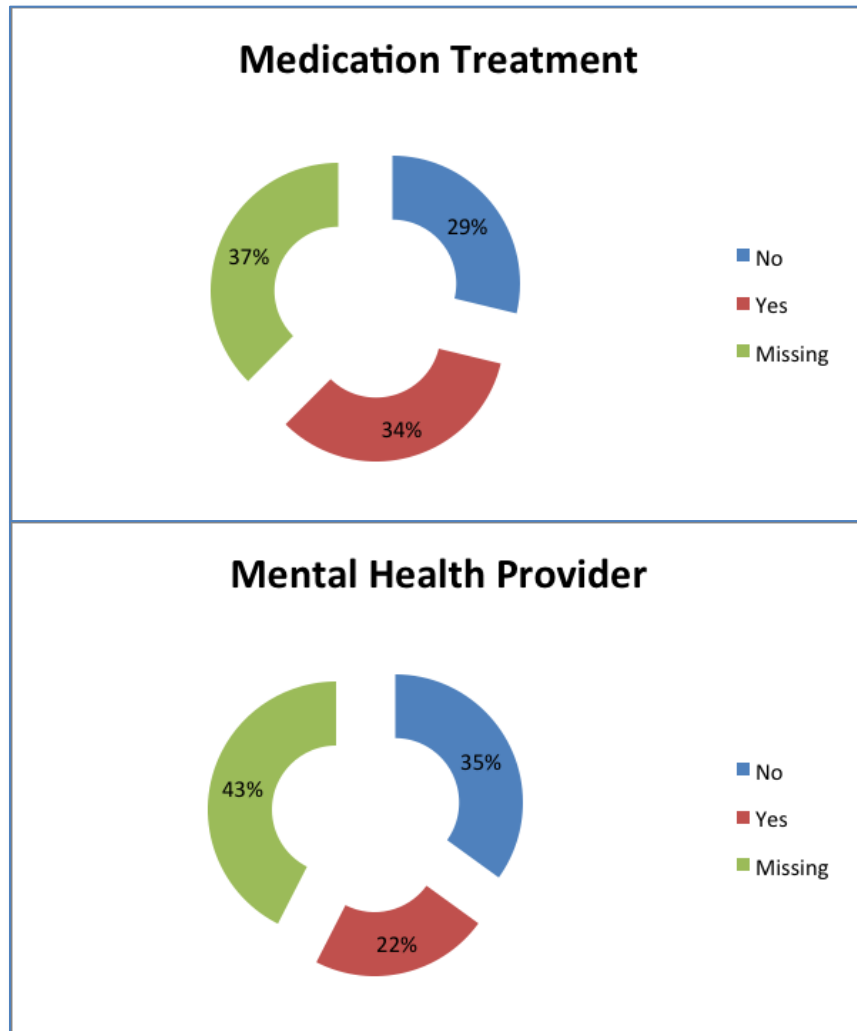


VIII. Mental Health and Past Suicidal Ideation

47%, or 80 cases, had a noted mental health history, with 79% diagnosed with depression and anxiety. These data were ascertained from information from family and friends as well as from the decedents' medical records. Even if the decedent only had one medical record and it was for something totally unrelated, there may be mention of mental health history in their past medical history section. For example, if a decedent presented to an emergency department in 2013 for stomach pain, someone who reviews the file could still see that in the past medical history they had listed PTSD, bipolar disorder or depression and anxiety.

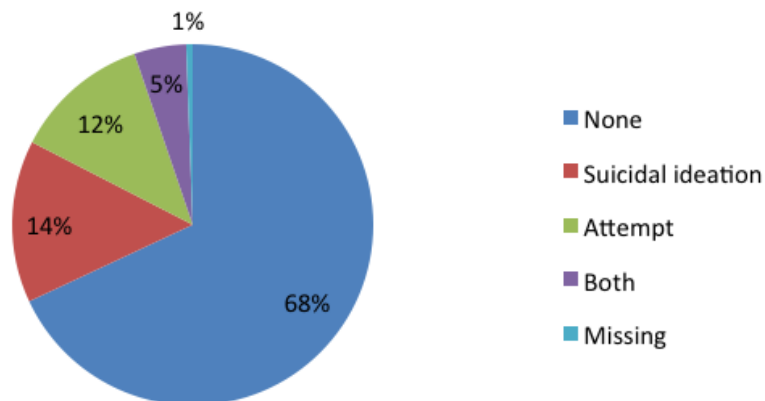


Of those 80 mentioned cases, 34% had a noted medication treatment regimen and 22% had a noted mental health care provider. This information was gathered in a similar method utilizing the report information and medical records.

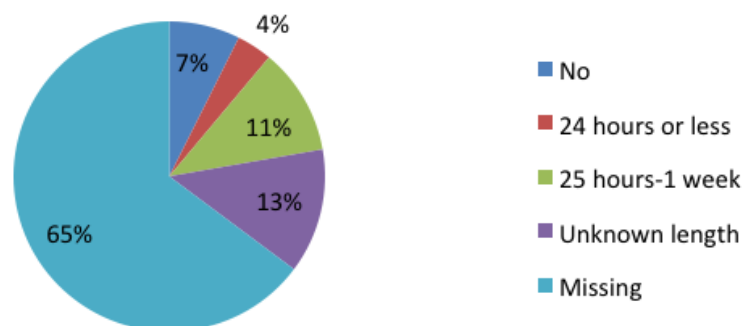


31% had documented past suicide attempts, suicidal ideation, or both; and at least 28% of those had some length of hospitalization secondary to their suicide attempt or suicidal ideation.

Past Suicidal Ideation and Attempts

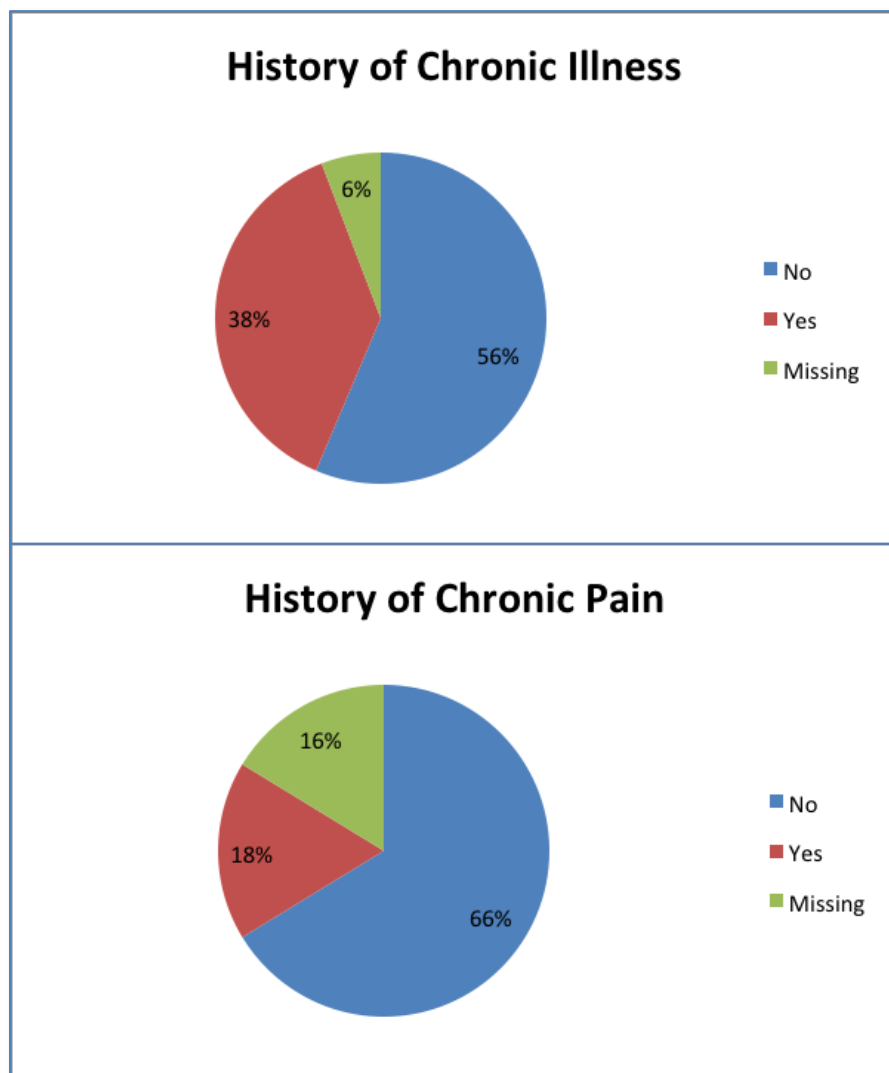


Hospitalizations from Past Suicidal Ideation/Attempts



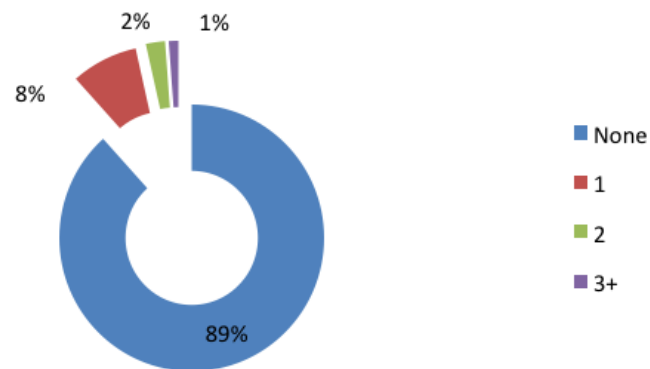
IX. Healthcare and Chronic Illness

65 cases or 38% percent had a documented history of chronic illness, and 30 cases or 18% had a documented history of chronic pain. Sometimes this information was mentioned in the declaration of intent or report from friends and family. Often times these data were gathered from the medical records. Some patients had recurrent medical notes for chronic pain treatment, cancer therapies, or chronic diseases like lupus, diabetes, or COPD.

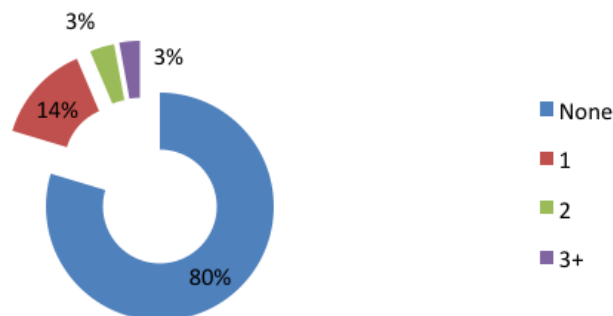


Within the cases, 11% of decedents had a history of hospitalization, 20% had emergency department visits, and 7% had psychiatric visits at either an emergency department or a specific psychiatric facility like West Hills.

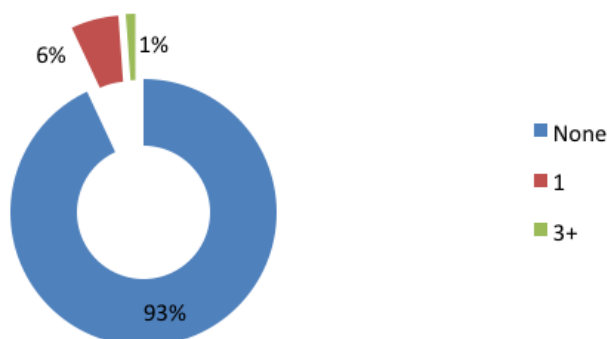
Number of Hospitalizations



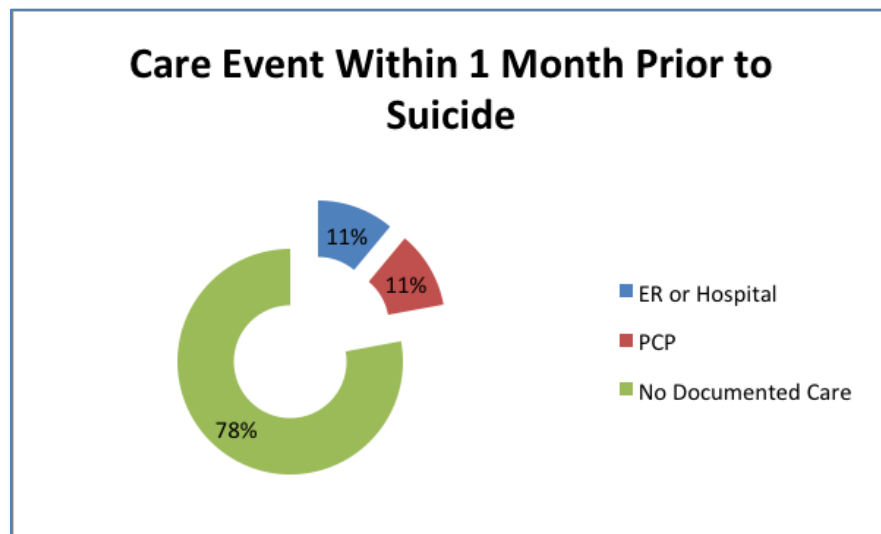
Number of Emergency Department Visits



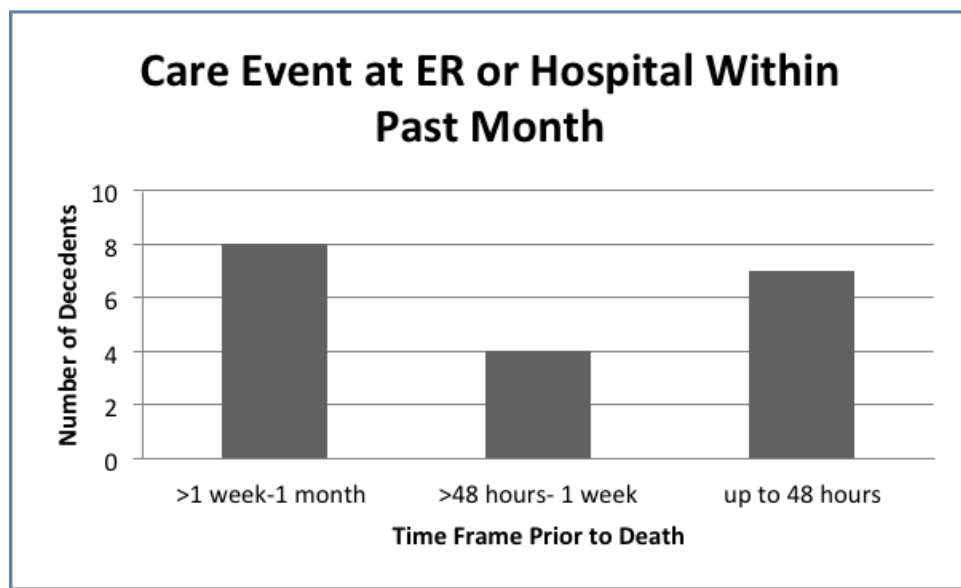
Number of Psychiatric Visits



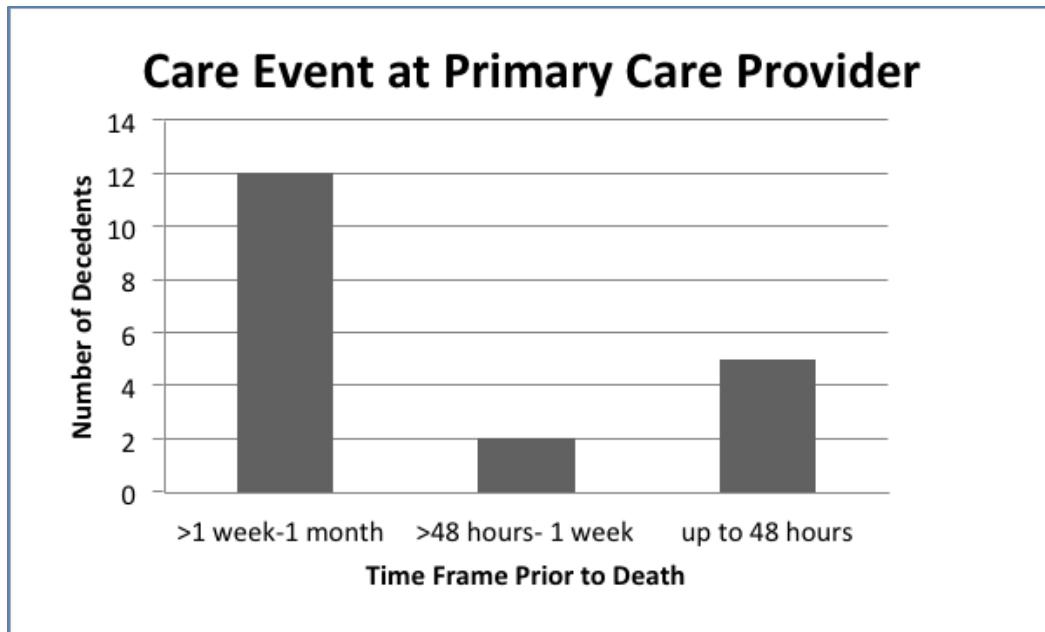
22% of cases had a noted care event with their primary care provider, emergency department, or hospitalization within one month prior to suicide completion.



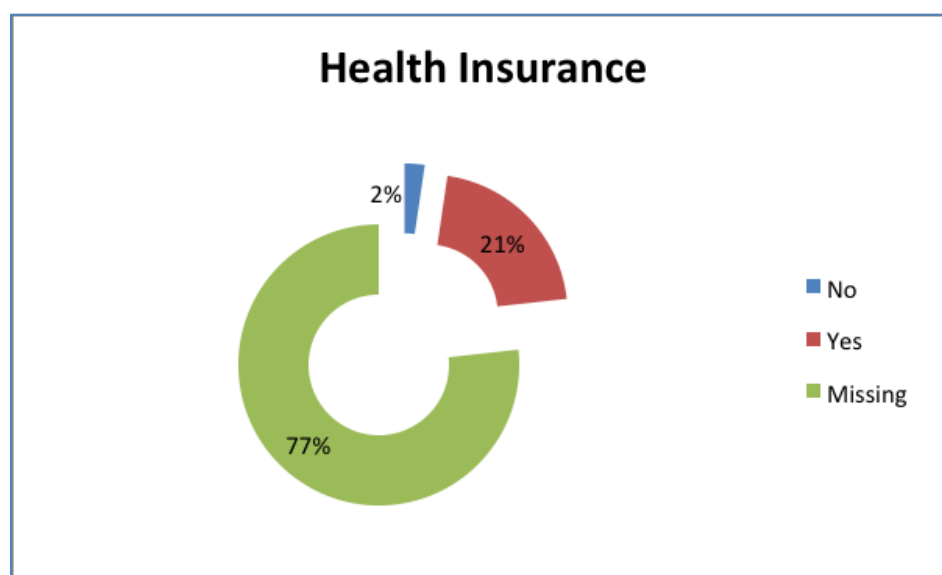
At a hospital or emergency department, seven cases were seen 48 hours prior to suicide, four cases were seen between 48 hours and one week prior to suicide, and eight cases were seen between one week and one month prior to suicide.



At a primary care provider, five cases were seen within 48 hours prior to suicide, two cases were seen between 48 hours and one week prior to suicide, and twelve cases were seen between one week and one month prior to suicide.



21% had documented health insurance, this spanned from Medicare and Medicaid to all types of private insurance.



Conclusion

Based on this information, there is clearly a missing link in the patient-provider interaction. From this data, the recommendation is that emergency room providers, hospitalists, and primary care providers ask about thoughts of self-harm, suicidal ideation, and depression/anxiety at every encounter as a routine part of their physical examination of the patient. Psychiatric health must be documented in every review of systems. Extra care must be taken to address this issue with patients when there is a documented history of mental illness, past suicidal ideation, drug/alcohol abuse, or terminal illness. Providers may only focus on immediate and life-threatening ailments, such as heart attack, stroke, or trauma; however, it is apparent that mental health can also pose a life-threatening risk. Providers must be trained in how to genuinely address mental health in order to help prevent suicide.

Another recommendation is to implement mandatory follow-up calls within 10-12 hours of discharge for every suicidal ideation or suicide attempt patient. Many times patients are discharged with instructions to follow-up with a mental health care provider within one week; however, this timeframe is too late for many patients who complete suicide soon after discharge. More comprehensive resources are needed at discharge. Patients could find step-by-step guidelines for making a follow-up appointment, lists of suicide prevention organizations, and information on crisis lines to be very useful in preventing further suicidal ideation and subsequent attempts, for example.